

Storer (D. H.) sub-

## STATISTICS

OF THE

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# BOSTON LYING-IN HOSPITAL.

BY

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## STATISTICS

OF THE

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SEVERAL of the gentlemen present may remember that I read a communication to this Society eight years ago, upon several hundred cases of midwifery which had occurred in my own practice. In that paper, I apologized for its meagerness, upon the ground that the private physician could not present such detailed accounts of his cases as those who were connected with public institutions, where the opportunities for study were more numerous and greater attention was devoted to minutiae. Having been connected with a small lying-in hospital for a period of four years, since those remarks were made, and having consequently possessed the advantages which that institution afforded, I feel in a manner compelled to present to you its statistics, limited though they are, as accurately prepared as I have been able to arrange them, from its foundation to the period of my leaving it.

My predecessors in office were Drs. Channing, Hale, Osgood, and Putnam. In preparing this paper, I have made the most free use of their records. Unable to determine, in most instances, under the care of which of those gentlemen individual cases have been treated, I have scarcely referred to either of them by name. Most faithfully have they each performed their duties.

1. *The whole number of Children.*—In 451 deliveries there were 456 children; in five cases twins occurred. In 331 cases, of which accurate notes have been kept, I find there were 132 males and 199 females.

2. *Age of the Patient when delivered, in 451 cases.*

|               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Age . . .     | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| No. delivered | 1  | 2  | 11 | 17 | 18 | 30 | 42 | 39 | 29 | 36 | 34 | 25 | 32 | 20 |
| Age . . .     | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 42 | 45 | 47 |
| No. delivered | 22 | 7  | 22 | 9  | 6  | 12 | 8  | 6  | 11 | 3  | 6  | 1  | 1  | 1  |

The youngest woman delivered was 16 years old, the oldest 47.

The greatest number of deliveries occurred at the ages of 22, 23, 25, 26, 28, and 21.

**3. Number of times each Patient has been Pregnant in 417 cases.**

|                          |     |    |    |    |    |    |    |   |   |    |    |    |
|--------------------------|-----|----|----|----|----|----|----|---|---|----|----|----|
| No. of pregnancies . . . | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8 | 9 | 10 | 12 | 16 |
| No. of patients . . .    | 193 | 88 | 40 | 25 | 23 | 18 | 14 | 8 | 2 | 4  | 1  | 1  |

By this table it is seen that the whole number of pregnancies of the 417 patients was 1060—that the greatest number of times any woman had been pregnant was 16, which occurred in but one instance—that 193 of the cases were primipara—and that the average number of times each had been confined was 2.

**4. Last Menstruation in 201 cases.**

|              |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| No. of days  | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 |
| No. of cases | 7   | 8   | 11  | 9   | 4   | 6   | 6   | 6   | 8   | 20  | 2   | 4   | 2   |
| No. of days  | 266 | 265 | 264 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 |
| No. of cases | 5   | 9   | 9   | 3   | 5   | 4   | 7   | 4   | 3   | 2   | 1   | 4   | 2   |
| No. of days  | 253 | 252 | 250 | 249 | 246 | 245 | 244 | 243 | 242 | 240 | 236 | 228 | 220 |
| No. of cases | 4   | 2   | 6   | 1   | 2   | 2   | 2   | 3   | 1   | 11  | 1   | 1   | 1   |
| No. of days  | 215 | 213 | 212 | 207 | 195 | 180 | 162 | 150 | 120 | 69  | 57  |     |     |
| No. of cases | 1   | 2   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   |     |     |

The longest period, previous to delivery, of the last menstruation, was 279 days—the shortest was 57 days; of the former were 7 cases, of the latter 1. The average number of days at which menstruation occurred previous to confinement was 256, or 36 weeks.

In two cases, menstruation occurred during each month of pregnancy. In one of these cases, the patient was 38 years of age, and this was her eighth pregnancy. The records read thus—"Has menstruated during the whole of pregnancy." Had never menstruated during a former pregnancy.

In the other case, the patient was 36 years old, and she was in her "sixteenth pregnancy. She had had 12 children, and 3 miscarriages. The first successive 5, were females; the last 6, males. She had been married nineteen years—nursed all her children—menstruated regularly during the whole period of her pregnancies."

**5. The period of Quickeening in 158 cases.**

|                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Days before confinement | 60  | 83  | 86  | 90  | 93  | 96  | 100 | 106 | 109 | 110 | 111 | 113 | 114 | 116 |
| No. of women            | .   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 1   | 3   | 1   | 1   | 1   |
| Days before confinement | 118 | 119 | 120 | 121 | 122 | 124 | 125 | 126 | 128 | 129 | 130 | 131 | 132 | 133 |
| No. of women            | .   | 1   | 1   | 6   | 1   | 1   | 2   | 3   | 1   | 1   | 1   | 5   | 4   | 2   |
| Days before confinement | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 142 | 143 | 144 | 145 | 146 | 147 | 148 |
| No. of women            | .   | 1   | 5   | 1   | 6   | 3   | 4   | 8   | 1   | 2   | 3   | 5   | 4   | 2   |
| Days before confinement | 149 | 150 | 152 | 153 | 154 | 156 | 157 | 158 | 159 | 160 | 161 | 163 | 164 | 165 |
| No. of women            | .   | 1   | 8   | 2   | 2   | 2   | 3   | 2   | 1   | 4   | 4   | 3   | 2   | 4   |
| Days before confinement | 166 | 168 | 169 | 171 | 173 | 174 | 175 | 176 | 180 | 186 | 187 | 188 | 192 | 199 |
| No. of women            | .   | 1   | 2   | 1   | 1   | 2   | 1   | 1   | 2   | 2   | 2   | 1   | 1   | 1   |

The least number of days in which quickening took place previous to confinement was 60—the greatest number of days previous to confinement was

199; of the former was 1 case, as well as also of the latter. The average number of days at which quickening occurred was 142.

A woman, aged 25, in her first pregnancy, stated "that she had never during her pregnancy experienced nausea or vomiting, nor felt quickening."

#### 6. *The Duration of Labour in 433 cases.*

|                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Hours in labour | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| No. of women    | 12 | 28 | 23 | 26 | 41 | 38 | 27 | 22 | 23 | 21 | 12 | 21 | 13 | 10 | 10 | 19 | 5  | 13 | 6  | 6  | 2  | 5  |

|                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Hours in labour | 24 | 25 | 26 | 27 | 28 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 40 | 41 | 42 | 45 | 48 | 53 | 58 | 70 | 74 | 88 |
| No. of women    | 8  | 6  | 3  | 2  | 5  | 2  | 2  | 3  | 1  | 1  | 1  | 4  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |    |

The least number of hours any woman was in labour was 1—the greatest number of hours was 88; of the former there were 12 cases, and of the latter 1. A greater number of labours occupied 5 hours than a longer time—and next in frequency were those completed in 6, 2, 7, 4, 3, 8, 10, and 12. The average number of hours was 11½.

In the 5 most protracted cases mentioned above, the mother did well in each instance, and in 3 of the cases the child was saved.

The case occupying 53 hours was one of mere inefficiency of pains.

That case which was terminated in 58 hours was rendered difficult by the presentation of "the right arm with the funis." The membranes broke without any pain being present, and the patient was not seen until several hours afterwards, when the arm and funis were found in the vagina. The child was immediately turned, but was still.

In the case in which labour was delayed 70 hours before its completion, a "sudden discharge of the liquor, without obvious cause," took place before the os uteri had become sufficiently dilated to expel the child.

In the case in which labour continued 74 hours, the size of the child alone appeared to be the only obstruction. The mother, twenty-five years old, had had two children, each of which, according to her account, weighed upwards of eleven pounds. She was in pretty good health, the presentation was natural, and she sustained her labour so well that I was unwilling to interfere—and eventually she gave birth, unaided, to a living male child, weighing twelve and a half pounds—the largest child which had been born in the institution.

In the remaining case, which occupied 88 hours, the left foot and head presented—the head considerably higher than the foot. "Some efforts were made to draw down the foot and push up the head, but finding the head most disposed to descend, the foot was supported during the pains, and the head came down."

#### 7. *The time of Birth.*—In 428 cases, 214 occurred between the hours of 7 A. M. and 7 P. M.; and 214 cases between 7 P. M. and 7 A. M.

These results differ from those in 280 cases published by me in the *New England Quarterly Journal of Medicine and Surgery* in 1843, and also 440

cases published by Dr. Metcalf, in the *American Journal of Medical Sciences* for October, 1847—in each of which a larger number of births are stated to have occurred during the night than during the day.

#### 8. The Months at which Delivery occurred in 451 cases.

| Months, . . .    | Jan. | Feb. | Mar. | Apr. | May  | June |
|------------------|------|------|------|------|------|------|
| No. of children, | 53   | 43   | 30   | 46   | 38   | 35   |
| Months, . . .    | July | Aug. | Sep. | Oct. | Nov. | Dec. |
| No. of children, | 46   | 26   | 35   | 31   | 41   | 27   |

The largest number of children were born in January, and the smallest number in August.

#### 9. Weight of the Children in 406 cases.

| Weight, $\frac{3}{4}$ lb.  | 1               | 2               | 3  | 4               | 4 $\frac{1}{4}$ | 5               | 5 $\frac{1}{2}$ | 5 $\frac{1}{4}$ | 6               | 6 $\frac{1}{4}$ | 6 $\frac{1}{2}$ | 6 $\frac{3}{4}$  | 7                |
|----------------------------|-----------------|-----------------|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| Male,                      | 1               |                 | 1  |                 | 2               | 2               | 2               | 9               | 3               | 8               | 1               | 18               | 8                |
| Female,                    | 1               | 1               | 1  | 2               | 1               | 3               | 2               | 6               | 5               | 9               | 10              | 9                | 7                |
| Weight, $7\frac{1}{4}$ lb. | 7 $\frac{1}{2}$ | 7 $\frac{3}{4}$ | 8  | 8 $\frac{1}{4}$ | 8 $\frac{1}{2}$ | 8 $\frac{3}{4}$ | 9               | 9 $\frac{1}{4}$ | 9 $\frac{1}{2}$ | 9 $\frac{3}{4}$ | 10              | 10 $\frac{1}{2}$ | 10 $\frac{3}{4}$ |
| Male,                      | 11              | 27              | 15 | 28              | 7               | 11              | 2               | 14              | 2               | 12              | 5               | 3                | 1                |
| Female,                    | 10              | 25              | 14 | 24              | 6               | 11              | 7               | 7               | 2               | 3               | 3               |                  | 1                |

The number of males in the above table was 222, whose aggregate total weight was  $1669\frac{1}{2}$  pounds; and the average weight of each was  $7\frac{1}{2}$  pounds.

The number of females was 184, whose aggregate total weight was  $1309\frac{3}{4}$  pounds, and the average weight of each was  $7\frac{1}{6}$  pounds.

It will be observed that the weights of the above children fall considerably below those of the cases reported by me in the first volume of the *New England Journal of Medicine and Surgery*, and also of those registered by Dr. Metcalf in his paper previously referred to. I can account for this only by the fact that the great mass of his cases, if not every case reported in those communications, referred to American mothers, whereas the *vast majority* of the mothers of the children, included in the table here presented, were foreigners. That my reasoning is not fallacious, will be perceived by the following table.

Of the 21 children which weighed 9 pounds, the mothers of 8 were Americans.

Of the 4 children which weighed  $9\frac{1}{4}$  pounds, 3 had American mothers.

Of the 15 which weighed  $9\frac{1}{2}$  pounds, 9 were children of Americans.

Of the 5 weighing  $9\frac{3}{4}$  pounds, 4 had American mothers.

Five of those which weighed 10 pounds were children of Americans.

The one weighing  $10\frac{1}{4}$  pounds, as well as that weighing  $12\frac{1}{2}$  pounds, were children of Americans.

In other words, of the 54 children which weighed 9 pounds and upwards, 31 had American mothers; although three-fourths of all the children born in the hospital had foreign parents.

The 4 children weighing less than 3 pounds were premature and *still*. Those weighing 3 pounds were born alive; one of them "died soon after leaving the hospital," which occurred ten days after its birth.

## 10. The comparative length of the Males and Females in 399 cases.

|                |     |     |    |     |    |     |     |     |     |     |     |
|----------------|-----|-----|----|-----|----|-----|-----|-----|-----|-----|-----|
| No. of inches, | 14½ | 15  | 16 | 16¾ | 17 | 18  | 18½ | 19  | 19¼ | 19½ | 20  |
| Males,         |     | 1   |    |     | 2  | 3   | 3   | 25  | 1   | 3   | 38  |
| Females,       | 1   |     | 1  | 1   | 1  | 5   | 2   | 10  |     | 4   | 33  |
| No. of inches, | 20½ | 20¾ | 21 | 21½ | 22 | 22½ | 23  | 23½ | 24  | 25  | 25½ |
| Males,         | 5   | 1   | 53 | 5   | 43 | 7   | 10  | 2   | 6   | 1   | 1   |
| Females,       | 3   |     | 48 | 5   | 38 | 3   | 10  | 1   | 1   | 1   |     |

In 399 cases, 230 were males and 169 females.

The greatest length seen in the males was 25½ inches. The least was 15 inches.

The greatest length in the females was 25 inches. The least was 14½ inches.

The average length of the males was 18 inches. The average length of the females 20 inches.

It will be seen that in this table the average length of the females is greater than that of the males, thus differing from the usual statistical tables.

## 11. The length of the Funis in 229 cases.

|               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Length,       | 4½ | 9  | 10 | 11 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| No. of cases, | 1  | 1  | 1  | 1  | 1  | 1  | 4  | 7  | 12 | 9  | 8  | 11 | 19 | 22 |
| Length,       | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 43 |
| No. of cases, | 28 | 11 | 25 | 18 | 9  | 13 | 14 | 4  | 5  | 2  | 1  | 2  | 1  | 1  |

It will be seen by the above table that the most common length was two feet; the next in frequency was 26 inches, and the next 23 inches. The longest being 43 inches, and the shortest 4½ inches. Such a diversity of opinion exists with regard to the length of the cord that I shall refer to an interesting paper upon this subject by Churchill.\* In his communication he presents three tables of measurements of the funis, by Dr. Adelman, of Fulda, Professor Henne, of Konigsburg, and himself. In the first table, made up of 40 cases, the most common lengths were 18 and 16 inches. In Professor Henne's table of 130 cases, 22 and 20 inches were most frequent; while the most common lengths in Churchill's table, composed of 212 cases, was 18 inches, and next in frequency two feet. Negrier† measured 166 cords—28 were 17 inches long, 112 were from 17 to 25½ inches long, and 26 above that length. In a table of 89 cases, published by myself in the paper previously referred to, cords of 18 inches in length were most common, and next those of 27 inches.

The longest cord in either of the tables presented by Churchill is 54 inches, and the shortest 12 inches. In the table I now present, one cord is observed 10 inches in length, one of 9 inches, and one only 4½ inches long. From the fact that in the three tables contained in Churchill's paper, together with that of Negrier and my own previously published, comprising

\* Dublin Journal of Medical Science, March, 1837, p. 21.

† On the length and strength of the umbilical cord at the full term of pregnancy.—Edin. Med. & Surg. Journ. April, 1846, p. 556.

together 537 cases, not a case occurs of a cord measuring less than 12 inches; it would appear that shorter cords must be quite rare. The cords measuring 9 and 10 inches in the table here published were measured by the attending accoucheur; the cord of  $4\frac{1}{2}$  inches was measured by the nurse of the institution, and Dr. Putnam, who was the physician of the hospital at that time, stated to me that he has no doubt of the accuracy of the measurement.

Although several writers speak of the umbilical cord measuring from a few inches to six feet, cases of the latter length must be very unfrequent. Dr. George N. Thompson of this city has lately published a case in the *Boston Medical and Surgical Journal*,\* in which the cord measured 5 feet and 9 inches in length.

In the *British and Foreign Medico-Chirurgical Review* for April, 1850, I find the following notice of a funis of remarkable length, copied from *Caspar's Wochenschrift*, 1849, No. 41, reported by Dr. Neugebauer.

"After a natural labour, the funis was found coiled round the child's body six times. It was of normal structure, but very thin, and is supposed by the author to be the largest on record. It measured  $67\frac{1}{2}$  Scheleswich inches (1.653 metre). Busch, in 2077 births, found only four examples of the funis measuring from 40 to 46 inches. Osiander mentions one of 50 inches, as a most rare occurrence. Siebold indicates one of 52; Michaelis one of 53; Baudelocque one of 57; one of the last length having also been observed once in 12,329 births at the Prague Lying-in Institution. The longest previous to the present one was indicated as measuring 60 inches by Michaelis."

Dr. Tyler Smith exhibited to the Westminster Medical Society (Jan. 12, 1850) a funis, which, measuring from the attachment to the umbilicus to its insertion into the placenta, was  $59\frac{1}{2}$  inches in length.

#### 12. Weight of the Placenta in 151 cases.

|               |      |    |    |      |                |                |                |   |                |                |
|---------------|------|----|----|------|----------------|----------------|----------------|---|----------------|----------------|
| Weight,       | 8oz. | 10 | 12 | 1lb. | $1\frac{1}{2}$ | $1\frac{1}{2}$ | $1\frac{3}{4}$ | 2 | $2\frac{1}{4}$ | $2\frac{1}{2}$ |
| No. of cases, | 2    | 1  | 12 | 26   | 41             | 38             | 16             | 9 | 2              | 5              |

The above table shows the weights most frequently met with were  $1\frac{1}{2}$ ,  $1\frac{1}{2}$  and 1 pound; most writers upon midwifery who refer to this subject consider the average weight as about one pound.

Of the 3 cases in which the placenta weighed less than 12 ounces, the child weighed in one case  $5\frac{1}{2}$  pounds, in one 7 pounds, and in another  $7\frac{1}{2}$  pounds.

Of the 15 cases in which the placenta weighed less than a pound, the child weighed in one case  $3\frac{1}{2}$  pounds; in one  $4\frac{1}{2}$ ; in one  $5\frac{1}{2}$ ; in four  $5\frac{1}{2}$ ; in two 6; in two  $6\frac{1}{2}$ ; in one 7 pounds; in two  $7\frac{1}{2}$ ; and in one  $9\frac{1}{2}$  pounds.

Of the 16 cases in which the placenta weighed 2 pounds and upwards, the child weighed in one case  $6\frac{1}{2}$  pounds; in one 7; in one  $7\frac{1}{2}$ ; in three 8; in three  $8\frac{1}{2}$ ; in one 9; in three  $9\frac{1}{2}$ ; in one  $9\frac{3}{4}$ ; in one 10; and in one  $12\frac{1}{2}$  pounds.

Of the 5 cases in which the placenta weighed  $2\frac{1}{2}$  pounds, the children

\* Vol. 42, No. 22, p. 451.

weighed in one instance  $6\frac{1}{2}$  pounds; in two,  $8\frac{1}{2}$ ; in one,  $9\frac{1}{2}$ ; and in one,  $12\frac{1}{2}$  pounds.

The placenta were weighed in but one case of twins, and in this instance they weighed  $2\frac{1}{2}$  pounds; the twins weighing together  $12\frac{1}{2}$  pounds.

From these data it appears that the weight of the placenta is not in all cases proportionate to the size of the child, although, generally speaking, there is undoubtedly a great correspondence. A remarkable instance of the disproportion which sometimes exists between the size of the child and that of the placenta is related by Dr. Kennedy\* of Dublin. He says, "The placenta occupied more than half the surface of the uterus, and was as large as that in a case of triplets, which had been recently in the hospital."

13. *Insertion of the Funis.*—In 387 cases in which the insertion of the funis is recorded, it was inserted in the centre of the child's body 197 times. In the remaining 190 it varied from one-quarter of an inch to, in one instance, two inches from the middle parts. That the mother had concluded her pregnancy in this case may be believed from the fact of the child's weighing  $9\frac{1}{2}$  pounds.

14. *Twins.*—In 451 cases, there were five cases of twins. Three of these occurred in the first pregnancy. In one instance, the patient was seven and a half hours in labour; her children, a male and female, each weighed  $4\frac{3}{4}$  pounds, and measured 17 inches. The placenta were united.

In a second case, the patient was twenty-six years of age; the labour occupied two and a half hours. The children, females, *both presented the head*; one weighed 6 pounds and one  $6\frac{1}{2}$  pounds. Two placenta.

In the third case, the patient, aged twenty-seven, had a very feeble constitution; had not been healthy for many years. Six months previous to entering the hospital, feet and legs began to swell, and at the time of her entrance had general anasarca. A fortnight before her entrance, she had an attack of cholera, owing to imprudence in diet, which at times was urgent and continued up to the time referred to. Three days after her entrance, labour pains came on and continued five hours, when two male children were born weighing  $4\frac{1}{2}$  and 6 pounds. The placenta were united. The mother was at first much exhausted; for a time she was exceedingly feeble, but under tonics and diuretics the anasarca subsided, and in a month she was discharged "very comfortable." In this case the second child was born still.

In the remaining cases, one woman, was forty years of age, and this was her fifth pregnancy. After a labour of an hour and a half, she was delivered of two males weighing  $4\frac{3}{4}$  and 6 pounds. There was but one placenta.

In the other case, the woman, thirty-seven years of age, was in her seventh

\* Dublin Journal of Medical Science, November, 1838. Also, London Medical Gazette, Dec. 1839, No. 11.

pregnancy. After a labour of three hours, a male and female were born ; the former weighing 7 and the latter 6 pounds. The first presented the vertex, and the latter the feet.

### 15. Presentations in 440 cases.

#### PRESENTATIONS.

|         |         |       |                |               |               |                |                   |                |           |   |   |
|---------|---------|-------|----------------|---------------|---------------|----------------|-------------------|----------------|-----------|---|---|
| 425     | 5       | 2     | 1              | 2             | 1             | 1              | 1                 | 1              | 1         | 1 | 1 |
| Vertex. | Breech. | Feet. | Face to pubis. | Hand to head. | Hand to face. | Foot and head. | Vertex and funis. | Arm and funis. | Placenta. |   |   |

Three of the *breech presentations* occurred in the first pregnancy. In all of the cases the children did well; and in two of them, the mother. In the third case, the woman, 28 years of age, entered the hospital with general anasarca; the second day after her entrance, was delivered of a male child, weighing  $5\frac{1}{4}$  lbs.; having been in labour 12 hours. On the second day after her confinement, she complained of general distress, and particularly of pain in the left hypochondrium, was unable to lie except on the right side, and with shoulders raised; occasionally vomited about a teaspoonful of blood. The right back was dull on percussion. The abdomen was somewhat tender—fluctuation distinct. Died on third day after delivery. No autopsy allowed.

Of the remaining two breech presentations, one occurred in a fifth pregnancy—and the other in a second pregnancy. In the former, the woman was 29 years old—and nothing abnormal had happened in her former labours. Now, the breech and funis presented; and after a labour of  $6\frac{1}{2}$  hours she was delivered of a male child, weighing  $9\frac{1}{2}$  pounds. During her labour, after the passage of one leg of her child, she had several attacks of fainting, and her pains though severe were not effectual. Several fainting fits also followed upon her delivery. On the third day after her confinement, she complained of a swelling on the inside of the right thigh about the size of a dollar, which was followed by phlegmasia dolens, from which she recovered and in six weeks left the hospital.

In the latter case, the woman was aged 30; she was in labour  $7\frac{1}{2}$  hours, and gave birth to a living male child weighing  $6\frac{1}{2}$  pounds.

In both of the presentations of the feet, the child was still. In one of the cases, the woman was twenty years of age, and this was her first pregnancy. She was  $9\frac{1}{2}$  hours in labour; and her child, which was a male, weighed  $6\frac{1}{2}$  pounds. The child was alive two or three minutes before it was expelled, but did not breathe afterwards, and could not be resuscitated, although numerous and long-continued efforts were employed.

In the other, the patient was twenty-seven years old, and this was her second pregnancy. She was in labour seven hours—her child, a female, weighed  $6\frac{3}{4}$  pounds.

But one case is registered of the *face to the pubis*—this was in a second

pregnancy; the patient being thirty-two years old. The labour occupied 6½ hours—the child, a male, weighed 4½ pounds.

Two cases are recorded of the *hand to the head*; both terminated favourably. In one of these, the patient was aged twenty-seven, and this was her first pregnancy; a loop of the cord protruded, and no pulsation could be felt in it. This was carried up over the vertex and occiput, and forced up behind the symphysis pubis. After a labour of 13½ hours, a female child weighing 6 pounds 13 ounces was expelled; at first its respiration was very feeble, but this was at last perfectly restored.

In the other case, the patient was aged twenty-five years, and this was her sixth pregnancy. The head was delayed somewhat at the orifice, notwithstanding the pains were very forcible. Besides the right hand of the child being applied to the head, the cord was also around the neck. The child, a male, weighed 7½ pounds.

One case occurred in which a *hand was applied to the face*. The patient was twenty-five years of age; the number of her pregnancies not recorded. Labour continued 9 hours—the child, a male, weighed 7½ pounds.

The *left foot and head* presented in one case. The labour continued 88 hours; the child, a male, weighed 5½ pounds.

In a single case, the *vertex and cord* presented; the patient was twenty-five years of age, and this was her first pregnancy. The labour continued 26 hours after the rupture of the membranes. The child, a female, weighed 7 pounds and 14 ounces; delivery by craniotomy. (See *Instrumental Labour*.)

An *arm with the funis* presented in one case. The patient was thirty years of age, and this was her third pregnancy. After being 58½ hours in labour, the child, a male, weighing 7½ pounds, was turned and delivered *still*.

The *placenta* presented in only a single case. The patient was twenty-six years of age, and this was her third pregnancy. Three days previous to delivery, she had slight hemorrhage. The hand was passed up at the side of the placenta, and the child delivered by turning; but little blood was lost. Both mother and child did well.

#### 16. *The number of cases in which the Funis was around the Neck.*—In 444 cases, the cord was around the neck in 31 instances.

In 21 cases it was once around the neck.

In 7 cases it was around the neck twice.

In 1 case it was around the neck twice, and passed under the right arm.

In 1 case it encircled the neck three times.

Unfortunately, in only 9 of these 31 cases, was the funis measured.

In 5 of these cases, the funis was once around the neck, and measured in 4 cases 26 inches, and in one case 27½ inches.

In 3 of the cases, the funis was twice around the neck, and measured in one case 32 inches, in another 35, and in the other 43 inches.

In the case in which the cord encircled the neck three times, it measured 30 inches.

The length of the labour varied in these cases from  $1\frac{1}{4}$  hour to 37 hours, as follows:—

|              |                 |   |                 |   |                 |   |   |                 |                 |   |                 |   |                 |                 |    |    |    |    |    |    |                  |    |    |
|--------------|-----------------|---|-----------------|---|-----------------|---|---|-----------------|-----------------|---|-----------------|---|-----------------|-----------------|----|----|----|----|----|----|------------------|----|----|
| No. of hours | 1 $\frac{1}{2}$ | 2 | 2 $\frac{1}{2}$ | 3 | 3 $\frac{1}{2}$ | 4 | 5 | 5 $\frac{1}{2}$ | 6 $\frac{1}{2}$ | 7 | 7 $\frac{1}{2}$ | 8 | 8 $\frac{1}{2}$ | 9 $\frac{1}{2}$ | 10 | 11 | 12 | 13 | 14 | 15 | 16 $\frac{1}{2}$ | 17 | 37 |
| No. of cases | 1               | 2 | 2               | 2 | 1               | 2 | 1 | 1               | 2               | 1 | 2               | 1 | 2               | 1               | 2  | 1  | 1  | 1  | 1  | 1  | 1                | 1  |    |

From the above data, *the length of the funis* and the *duration of the labour*, it would not appear that the process of delivery had been interfered with by the position of the funis around the neck.

As regards the child in the 31 cases referred to, it did well in 28 cases. In several cases, it cried immediately upon being born.

In one case where it was resuscitated, the record states "funis twice around the neck, has no pulsation; child was washed in alcohol, cried, and was well in a few minutes."

In a second case, the cord was very tightly coiled around the child's neck, so that previous to the exit of the shoulders, blood flowed freely from its nose and mouth; and the child was not perfectly resuscitated for nearly half of an hour.

Of the three still children, in which the funis encircled the neck, one was of a second labour, weighed  $6\frac{1}{2}$  pounds, and nothing appears in the record to account for its death. "There was no pulsation in the cord, nor any other indication of life. The breast was sprinkled with alcohol, friction was employed, with artificial respiration, but without effect."

In the second case, the woman was thirty-seven hours in labour. Four days previous to her delivery, she was attacked *with bearing down pains followed by flooding*—and lost about a pint of blood at that time. The record does not show whether the motion of the foetus was felt after that time or not.

In the third case, the umbilical cord was around the neck, and under the right axilla. This was a second pregnancy, and the woman thirty-four years of age. The child, a male, weighed  $9\frac{1}{2}$  pounds. Labour continued 28 hours, and was terminated by the exhibition of ergot.

The above cases serve to corroborate the opinion of Churchill, that when the cord is of the ordinary length, labour is not delayed by its being coiled around the neck of the child. And the experience of Cade\* respecting the foetus being destroyed by apoplexy, produced by the pressure of the funis around the neck—and also the experiments of Negrier "that the umbilical cord is both long enough and strong enough to produce strangulation in a new-born infant, by being twisted round its neck after the head is delivered."

NOTE.—As the question was asked by several gentlemen, upon the reading of this communication, "How did Negrier arrive at his conclusions?"—and as

\* Reflexions et observations sur l'entabillement du cordon ombilical autour du cou du fœtus.—*Encyclographie des Sciences Médicales*. Avril, 1841.

others upon perusing it may be disposed to make similar inquiries, I present the following details from the *Edinburgh Medical and Surgical Journal*, April 1st, 1841, page 556 : "A girl of bad character was accused of having strangled her child by means of the umbilical cord, before it was completely expelled from the uterus. As there was a difference of opinion amongst the medical men as to the possibility of the umbilical cord possessing sufficient strength or length for this purpose, Dr. Negrier performed a number of experiments for the purpose of ascertaining the strength of the cord, and measured it in 166 cases to arrive at its average length.

"Of the 166 cases, it was remarked that in 144 the umbilical cord floated free within the uterus; in 20 it was rolled around the neck of the child; in one it was round the shoulders; and in one between the thighs, the breast presenting in this case: 98 of the umbilical cords were not varicose, and 68 were varicose. As to length, 28 were 17 inches long; 112 were from 17 to 25½ inches long, and 26 above that length.

"The resistance of the umbilical cord was ascertained by attaching weights to one end of the cord until it ruptured, the weights being always attached to the placental extremity. About one-half of the cords were passed by their middle over a round bar, and weights attached till they gave way; the other half of the number were rolled once and a half round the same bar, covered with linen, so as to bring it to the diameter of a child's neck, when it was found that these supported a greater weight than those over the plain bar. The varicose umbilical cords were ruptured with a lesser weight than the sound cords, and generally gave way at one of the varicose dilatations. The mean weight which these varicose cords supported before they gave way was eight pounds Troy; the most resistant supported fourteen pounds seven ounces. The medium resistance of the non-varicose umbilical cords was fourteen pounds four ounces Troy; but one cord required twenty-five pounds three ounces to rupture it.

"Dr. Negrier next made a few experiments to ascertain what weights suspended round the neck of an adult would produce such a degree of compression as to cause unpleasant feelings or strangulation. A weight of eight pounds was suspended to a cord passed once and a half round the neck, the back of the neck being upwards. The respiration was rendered difficult, and the brain strongly congested in two minutes. Vertigo commenced soon afterwards. The respiration, however, could be continued with difficulty. When the face was placed upwards, the effects of the congestion were more rapid; the respiration was much impeded, but was still possible; but Dr. Negrier thought that death would have resulted if this position had been maintained for a quarter of an hour.

"When the experiment was made with a weight of thirteen pounds, and the face downwards, rapid congestion of all the vessels of the head took place; the eyes became injected, and filled with tears; the respiration was very

laborious, but was still possible. It was, however, dangerous to continue the experiment for two minutes.

"When the same experiment was repeated, but with the face looking upwards, the strangulation was almost complete. Respiration was so impeded that Dr. Negrier thinks death would have resulted in less than five minutes.

"From these facts, he infers that the umbilical cord is both long enough and strong enough to produce strangulation in a new-born infant, by being twisted round its neck after the head is delivered. A force applied to a cord equal to thirteen pounds would strangle an adult in five minutes, and a much less force would strangle a child."

17. *Instrumental Deliveries.*—In 451 cases, eight were delivered by the forceps and two by craniotomy.

Of those delivered by the forceps, six were in cases of the first pregnancy, one in a second pregnancy, and one in a fifth pregnancy.

Five of the eight children were born alive; of the remaining three, one patient was aged 32; this was her second pregnancy, and the child presented with the face to the pubis. After a tedious labour of twenty-five hours, a male child was delivered weighing  $6\frac{1}{2}$  pounds.

In a second case, the patient was 32 years of age, and this was her first pregnancy—at the expiration of twenty-seven hours her delivery was completed—the child, a male, weighed  $8\frac{3}{4}$  pounds. "It had apparently been dead for several hours."

In the third case, the mother, aged 24, was in her first pregnancy; after a labour of twenty-eight hours she was delivered of a male child which weighed 7 pounds.

Of those cases in which craniotomy was performed, one patient was 28 years of age, and this was her first pregnancy. After thirty-six hours of tedious labour, the head was perforated, and "the child was delivered with a great deal of difficulty, requiring much force to extract it. Child was very offensive, appearing to have been dead some time." The child, a male, weighed 7 pounds.

Previous to the operation being performed, she had become feverish and restless; the pulse was 100. The external parts were swollen and tender; a copious and offensive discharge flowed from the vagina, and vomiting was present. After delivery, the uterus at first contracted but little, and quite a profuse hemorrhage ensued, which was controlled by pressure, the application of ice, and administration of ergot. In about an hour her face became pale; the pulse was 120—the respirations were 40 in a minute, and there was great restlessness. In a few hours, the pulse became too rapid to be counted, the surface was cold, the respiration laboured and stertorous, and she gradually sank and died in about twenty hours after her delivery.

In the second case, the patient, 25 years old, upon her entrance to the hospital reported herself as never having enjoyed good health, and as having

aborted once at her fifth month. On the 30th of December, 1837, the records state her as having had "distinct preparatory pains during latter part of night for a week past." On the 26th of January, "patient has had for some time a very considerable foul discharge from vagina." February 6th, "on examination at 9 A. M., os uteri was found dilated to a small extent." She continued to have more or less severe pains until the night of the 17th, when the membranes broke. Here follows Dr. Putnam's report, 288 hours after the uterus began to dilate: "At 9 A. M. (18th), os uteri dilated freely, vertex presenting with funis; no pulsation in funis nor in foetal heart; pains frequent and strong; at 12 M. no progress; abdomen tender on pressure; 4 P. M., complains of headache; some progress in labour; pains continue; *head perforated*. After the collapse of the bones, the pains became stronger, and the labour was finished in an hour and a half. Female, 7 pounds 14 ounces.

"9 P. M. Has slept a little; says she feels comfortable; no headache; pulse 102; some thirst; some after-pains. R.—Tinct. opii, gtt. xx; sinapism to abdomen.

"19th. Slept well in night. Flowing considerable, but not excessive; after-pains not severe. In other respects comfortable. Pulse 66."

On the day after delivery peritonitis supervened, and for several days she was very sick, but gradually recovered, and left the hospital on the 30th day of March, "doing well."

18. *Still-born*.—I find twenty-seven cases of delivery, in which the child was not born alive.

One of those was an instance of arrested development.

Five were cases of premature delivery.

In two cases, craniotomy was employed.

Three were delivered by the forceps.

One was a presentation of an arm and the funis.

Two were presentations of a foot.

One was a presentation of the breast.

In one the mother had constant convulsions for two hours previous to delivery.

One child was putrid when delivered.

In one case no physician was in attendance.

One was the second expelled of twins.

Of the remaining eight cases, two occurred in the first pregnancy, and six in the second pregnancy.

Of those of the first pregnancy, one patient, aged twenty-four years, had a tedious labour of thirty-seven hours, and was at last delivered by the assistance of ergot.

Of those in the second pregnancy, one aged thirty-four, after a labour of twenty-eight hours, was delivered of a male child weighing  $9\frac{1}{2}$  pounds, with the umbilical cord around the neck, and under the right axilla.

In another case, the woman aged twenty-four (who had had a still-born child a year and a half previously), after nine hours labour, was confined with a male weighing 9½ pounds. The records of the case thus explained the death of her child. "The head after successive pains passed through the labia; but the body was retained through second pains from the great breadth of the shoulders, the passage of which was assisted by the hand. The left hand laid under the chin, with an arm on the thorax—the funis having a bend and lying under it—thus making a great resistance to the circulation."

The case of *arrested development* occurred in a twin. After the birth of a healthy male child weighing more than 11 pounds, "a small opaque substance came away which proved to be a foetus enclosed within its own proper membranes, which were extremely delicate. The length five inches. The bones of the head were distinctly ossified. Both scapulae were firm and hard; the left having the bones of the arm and fingers; the right having the humerus only. There were no lower extremities, the pelvis was imperfect. The vertebrae of the spine was distinct, as also the ribs. The whole being a mass of adipocire."

19. *Lacerated Perineum*.—I find but four cases of *lacerated perineum* spoken of, and these were all in the first labour.

In one case, the head was delayed a long time by the resistance of the external parts; the pains in the meanwhile were vigorous, and although the perineum was firmly supported, it suffered a slight laceration when the head finally passed. The records read, "it may be well to add that the patient was dwarfish, and the child rather large." The child, a female, weighed 8½ pounds.

In a second case, where the forceps were applied, there was a slight degree of laceration, although the perineum was firmly supported.

In a third case, the laceration extended two-thirds of the space between the vagina and anus. It was probably torn by the passage of the shoulder, which immediately followed the head, while the perineum was unsupported in consequence of the accoucheur's attention being directed to the condition of the umbilical cord which was protruded by the side of the head.

The fourth case of laceration occurred in a patient whose perineum was left unsupported to test the utility or inutility of such a course.

20. *Diseases*.—In the 451 cases of confinement, six cases of peritonitis occurred; three of convulsions; two of diarrhea; two of utero-hemorrhage; one of phlegmasia dolens; one of ascites; one of neuralgia; one of typhus fever.

Neither of the cases of *convulsions* occurred during the period of my attendance, and, as I should injure the reports by an abstract, they are copied entire from the hospital records. All the cases of *peritonitis* terminated favourably, as well as those of *hemorrhage*; that of *phlegmasia dolens*; that of *neuralgia*;

and one of the cases of diarrhoea. While the case of ascites, one of the cases of diarrhoea, and the case of ship fever, were fatal.

The case of dropsy occurred in a woman twenty-eight years of age, who entered the hospital pregnant with her first child. Her lower extremities were anasarca throughout their entire extent. A fortnight after her entrance, after a labour of twelve hours, she was delivered of a child weighing  $6\frac{1}{2}$  pounds. On the next day was comfortable, but oedema of the face noticed. On the second day after her confinement, complained of general distress, and particularly of pain in left hypochondrium; was unable to lie except on right side, and with shoulders raised. Occasionally vomited a small quantity of blood. Respiration was somewhat laboured on percussion; right back was dull. Respiration coarse, especially at the upper two-thirds. Left back presented nothing abnormal. Abdomen somewhat tense; fluctuation distinct. On the next, the third day after delivery, sat up in bed, exceedingly pale. Occasionally vomited blood, but expressing herself as much more comfortable. Died at noon. Autopsy not allowed.

The patient who died with diarrhoea was twenty-seven years of age, and this was her first pregnancy. She had suffered from diarrhoea for many weeks in the early part of her pregnancy, and in a greater or less degree during the whole period of it, frequently having copious bloody dejections. Was delivered, July 29th, of a child weighing eight pounds. Two days after delivery, diarrhoea reappeared, and she died on the 10th of August. The autopsy exhibited, at the lower part of the large intestines, within two feet of the anus, two groups of ulcers embracing the whole circumference of the intestines. The lower cluster, containing several large ulcers, was situated about four inches below the upper. One ulcer in this cluster was  $1\frac{1}{2}$  inches in length by one inch in breadth; there were several other ulcers in both groups an inch in diameter. These ulcers were rough, ragged, dark, and foul; irregular in form, having edges somewhat thickened, deep, extending in some places through the muscular coat, and without granulations. The muscular and nervous coats of the rectum seemed to be much thickened, and the volume of the intestines greatly increased.

The patient who died of typhus fever entered the hospital November 22d, just after her arrival from Ireland. She was confined the same day, and was comfortable until the fever showed itself. On the 29th of November, she was sent to the City Hospital at South Boston, and there died.

The case of neuralgia was very severe and protracted, although at last relieved.

Julia Scannel, aged 28, in her fifth pregnancy, entered hospital June 29th, 1844. On the 23d of August, after a tedious labour of  $35\frac{1}{2}$  hours, owing to the head being impacted in the brim of the pelvis, she was delivered by the forceps of a living male child weighing  $9\frac{3}{4}$  pounds.

25th. Complained of considerable soreness in abdomen, which is much increased by pressure; pulse 70. Fomentations of poppy-heads.

26th. Much more comfortable.

28th. Complains of pains in both lower extremities, and also in right shoulder. Spts. of camphor to be applied to limbs. Pulv. ipecac. et opii gr. viii.

*Sept. 1st.* For the last two days, pain has been confined to the right lower extremity; upon the instep, the sole of the foot, and slightly, comparatively, operating in the calf of the leg. No swelling nor heat of the limb at any part. Rub  $\frac{3}{j}$  of veratrine ointment,  $\frac{3}{j}$  to the  $\frac{3}{j}$  of lard, upon the lower portion of spine, and also upon the instep.

5th. Relieved slightly upon the application of the veratrine; pain very severe at night, keeping herself and the other patients in the room with her.

From this period, she complained constantly of more or less pain in this limb, greatly aggravated at night—relieved only temporarily by hyoscyamus and conium internally, opiate enemata, and aconite, veratrine, antimony, eroton oil, &c., externally applied.

Causing great inconvenience to the inmates of the hospital by her continual complaints, and the nature of her disease being such as would probably cause it to continue for a considerable length of time, and as she could receive the same attentions elsewhere, the attending physician advised her removal; and she left, Sept. 14th, for the Massachusetts General Hospital, where she remained until the following November, when she was dismissed, relieved.

21. *Convulsions.*—I. Ruth Pinkham, æt. 30, seamstress, entered Jan. 14th, 1833. Has had two children. A fortnight previous to the birth of her first child, was attacked with convulsions; child still-born. Second labour natural. Lost a sister by convulsions. Is subject to headache—now face and limbs much oedematous. Catamenia about May 7th.

*Jan. 31st.* This morning, complains of headache; mind much agitated last evening; venesection  $\frac{3}{viii}$ ; at evening, head not being relieved, sulphate of magnesia in infusion of senna. Medicine acted powerfully in evening and night.

*Feb. 1st.* At half past 7 A. M., in bed, was attacked with convulsions. Was bled immediately  $\frac{3}{xxii}$ , and had cold applications to head. Became sensible in about fifteen minutes, but not conscious of what had happened. Was very faint and very thirsty, and complained of a strange feeling in her head. At 9 A. M., again convulsed; was bled  $\frac{3}{xviii}$ . Sinapisms were applied to feet. On examination, os uteri found soft, not dilated. At 10 $\frac{1}{2}$  A. M., again convulsed. Had infusion of valerian  $\frac{3}{ss}$  to Oj of water. Assafetida grs. xxv in enema. Bladder of ice to head. In interval of fits, mind is rational. At 11 $\frac{1}{2}$  A. M., convulsions recurred; again at 1 $\frac{1}{2}$  P. M.; fit more violent; venesection  $\frac{3}{xii}$ . Before recovery from this fit, again attacked at 2 $\frac{1}{2}$  P. M.; venesection  $\frac{3}{vi}$ . This fit the most severe, and followed by complete syncope. A fall of water directed upon head for fifteen minutes, and afterwards cold applications as before. Patient now became quiet—insensible, or with difficulty roused. At 3 P. M., os uteri somewhat dilated; pain slight. At 4 P. M., had in infusion ergot  $\frac{3}{j}$ ; in ten minutes,  $\frac{3}{ss}$ , repeated in twenty minutes, and again in twenty more. Pains came on; labour natural, easy; completed at 9 P. M. Patient rational and perfectly sensible during the last stages; placenta came away ten minutes after child; uterus contracted well; child still-born; male; weight seven and a half pounds; length nineteen inches; middle point one and a half inch above umbilicus. Patient continued tranquil about an hour; expressed great joy at being through her labour; was removed to another bed, and again attacked with convulsions. At 11 $\frac{1}{2}$  P. M., fit recurred; the two last fits not so violent as the two preceding, but

patient much exhausted; cold and sinapisms renewed; a blister six by four inches applied to back of neck; assafetida grs. v given in pill, to be repeated every two hours to grs. xx; calomel grs. v now in pill, and to be repeated in two and four hours.

2d, 9 A. M. Has passed night in a state of drowsiness; blister well drawn; pulse 120, intermittent (this noticed previous to convulsions); is disposed to sleep; assafetida grs. v. 9 P. M.—Heavy sleep during day; when roused, answers questions; medicine has acted on bowels. At 5 P. M., skin being very hot, had ipecac. gr. j. At 5 $\frac{1}{2}$ , nit. potass. gr. v, to be repeated every four hours to gr. xxv, unless it acted upon the bowels; has taken gruel; now to have an enema of starch and ol. ric.  $\ddot{\text{a}}\ddot{\text{a}}$   $\ddot{\text{z}}\text{j}$ .

3d. Slept during night; three dejections; says she feels very comfortable; pulse 100; tongue bitten during convulsions; mouth affected by calomel.

9 P. M. Has been awake the greater part of day; mind clear; not conscious that she has had convulsions.

4th. Night good; pulse 100; sits up in bed with ease; wishes tea and cracker.

5th. Doing well; more strength; cheerful; chamomile tea for mouth. Ol. ric.  $\ddot{\text{z}}\text{ss}$ .

6th. Three dejections; has milk; cannot read, letters appearing confused.

7th. Last evening had pain in abdomen, with swelling and tenderness. Fomentations of chamomile flowers applied with relief.

8th. Last night had ext. hyoscy. gr. ij; slept well; one dejection.

9th. Gains strength daily; mouth better; has at times headache, pain passing from over eyes through head backwards.

25th. Has been daily improving; eyesight better, not perfectly restored; has palpitation on sudden exercise; pulse continues to intermit.

*March 4th.* Discharged as a wet-nurse.

II. Elizabeth Knight, æt. 33, entered Feb. 19th, 1844. Health good; first pregnancy; last menstruation June 10th; period of quickening, Oct. 24th.

*Feb. 22d.* Was called to prescribe for her on account of vomiting. Lying on bed in good spirits (temperament lively). States that, on Sunday evening, February 11th, had eaten very abundantly of mince pies and other gross food. Vomiting has continued from that time to the present. Tongue somewhat furred; pain in bowels; no febrile affection; has already had ol. ric.  $\ddot{\text{z}}\text{j}$ , and an enema of soap and oil.

23d. Labour commenced 7 A. M.; child born 12 $\frac{1}{2}$  M., Feb. 24th; male; weight seven and a quarter pounds. During and immediately after labour, there was considerable hemorrhage; placenta removed at once, and without difficulty. The hemorrhage was considerable, causing faintness, which continued for twenty-four hours; pulse frequent and feeble.

26th. Yesterday afternoon (according to report of nurse), felt numbness in right leg, and somewhat in right arm. During the night, was frequently awaked from sleep by a spasmoid starting of the head; the same sensations continuing in the leg and arm; now, is able to move both arms, but somewhat stiffly; fingers move rigidly; while in bed can draw up both lower limbs with ease (according to report of nurse, both the right leg and right arm were paralyzed during the night); pulse feeble; bowels free. Cold applications to head; blister to back of neck.

27th. Moves right arm and right leg; paralysis of left leg and left arm; sensibility to touch natural; at times, the head has a jerking motion, as if the patient were affected with violent chills; mind entirely clear; no paralysis of face; no pain in head or elsewhere; yesterday endeavoured to walk from the

bed to the fire, but would have fallen without assistance; in the night, some delirium; now, pulse 120, feeble; skin cool; bowels free. Blister to be continued on neck.

28th. 9 A. M. Delirious in night; no sleep. Now has pain on top of head; paralysis of left side of face; the tongue, when protruded, forms a curve, the apex pointing to the left; pulse 120; mind clear at this moment, but she is inclined to talk a great deal, and at times incoherently; utterance somewhat indistinct. Pulv. ipecac. gr. v every fourth hour, unless vomiting.

12 M. Has had involuntary discharges of faeces and urine. Has taken three powders of ipecac. After the third, vomited, chiefly some gruel. Skin moist. Pulse 120; softer, more full. Continue ipecac. unless free vomiting.

4 P. M. Has continued the ipecac.; no more vomiting. Was quiet until 3 P. M. Since then, delirious; tries to get out of bed. Frequently screaming. Tinct. opii gr. xxx. Head turned towards *right* side. Mind perfectly clear. Pulse 150; feeble. No dejection.

8 P. M. Frequent convulsions, lasting for space of five to ten minutes; affecting the right extremities in some degree, but the left extremities and trunk violently, and attended with severe pain. Asks to be "held tight," and have pressure made upon the back. No nausea; much thirst. Pulse 160; tinct. valerian and hops,  $\frac{1}{2}$  ss, at 9 o'clock and every fourth hour.

29th. 9 A. M. During night, the convulsions continued, occurring every hour or two, and lasting ten to fifteen minutes. Slept during the intervals of the convulsions. Now, pulse 150. Somewhat less feeble; convulsions frequent. Complains that the spasms cause pain in the eyes. Head turned to the *left* side. Intellect clear. Continue medicine p. r. n.

1 P. M. Cheeks flushed. Pulse somewhat more full. Thirst as before. Omit tinct. valerian and hops. Give a Rochelle powder once in three or four hours. Lemonade.

8 P. M. Convulsions almost incessant. Mind clear, both during their continuance and in the intervals. Pulse 150, feeble. Pulv. ipecac. et opii grs. x at night.

*March 1st.* First part of the night comfortable. At about 12, was faint. Respiration heaving; sighing. Extremities cold. Since 12 o'clock, convulsions less frequent. No dejection. Urine free. Now complains of pain in muscles of neck (right side) which are strongly contracted. Mind clear. Skin cool. Face pale; livid. Pulse 130. Infus. sen. comp.  $\frac{1}{2}$  iii. 12 M. Skin moist and warm. Pulse 125; of a better character. Says she "feels better." Paralyzed extremities painful on pressure; even slight touch. Motion of the arm causes pain in the shoulder joint.

8 P. M. Mind clear, but considerably excited. Restless; complains of pain in right wrist, "small of back," and through hips. Thirst intense. Two dejections in the afternoon. Tongue moist. Pulse 140. Pulv. ipecac. and opii gr. viii at night. Infus. valer. et humuli p. r. n.

2d. Slept about an hour after the opiate. Then had a convolution; and another at 6 this A. M., which lasted two hours. The convulsions affect, at present, chiefly the muscles of the face, throat, and chest, greatly impeding respiration and deglutition. Says she "feels better." Mind at times not clear. Memory good; perfect; but is more frequently delirious. Motions of right arm stiff. Tongue protruded with more firmness. Pulse 100; tolerably firm. Urine involuntary. Carb. ammon. gr. ii every third hour.

6 P. M. Convulsions of muscles of chest and neck nearly all day; none of upper or lower extremities. Coldness from feet to middle of trunk. No loss of consciousness.

3d. No sleep in night. Convulsions almost incessant, chiefly of neck and chest. Less thirst; one dejection in the night. Now skin warm. Face occasionally flushed. Pulse 120; sufficiently full. Omit carb. ammon. Pulv. ipecac. gr. iii every fourth hour; omit, if vomiting. 5 P. M. Vomited after the powder; convulsions occur every ten or fifteen minutes; limited almost entirely to the left side of throat and face; muscles of the chest very slightly affected. Articulation more difficult; skin quite warm; pain in the head; pulse 130. Pill. assafœt.

4th. Convulsions all the night; no sleep; pupils dilated. Extremities at times cold. Asks for wine; may take it. Omit the pill on account of the difficulty of swallowing.

6 P. M. Retains consciousness; has no vision; pain in the head; bloody mucus in dejections. Nurse reports a discoloration about sacrum. Mist. assafœt.

5th. 7 A. M. Very little sleep at night; convulsions almost constant, so much so as to prevent swallowing or articulating. Pulse 100; not very feeble. Enema of mist. assafœt.

6 P. M. During day, the convulsions have continued; mouth opened with difficulty; wine and liquids introduced by prying it open with a spoon. At times delirious, but for most part mind clear. Bowels moved by the enema. This evening, beef-tea and wine, and, if restless at night, tinct. opii gtt. xxx.

6th. No sleep; convulsions almost incessant; respiration during the paroxysms less difficult; deglutition impossible.

7th. As before.

8 P. M. Morphiæ sulph. gr. one-quarter at night.

8th. Muscles of the face drawn to the *left* (this may not have been recorded before). At first, they were drawn to the *right*. After the morphia, slept; convulsions recurring as before.

4 P. M. Has been very drowsy all day; roused only to take nourishment. Enema of soap and oil.

9th. In the night, very restless, but the drowsiness continued. Had only one dose of morphine in the night. Bowels moved by enema. Not able to move the head (this has been the case for three or four days); takes less notice. Until to-day, has asked eagerly for her drinks, &c.; now drowsy, comatose. Skin having a livid cast, but warm; pulse 160; feeble.

6 P. M. Pulse 200; respiration almost entirely abdominal. Eyes for most part directed steadily to the right, but are occasionally turned to the left. Has had no voluntary motion of head for a week past; it lies just as it is placed; swallows with great difficulty. At night, morphiæ gr.  $\frac{1}{2}$ d, if restless.

10th. Same, excepting less convulsion.

11th. During night, some sleep, soon after opiate; no convulsions; some pain in abdomen and side; now pulse 136; mind perfectly clear; articulation more distinct. Asks for a little rye pudding, and for brandy and water; may have it.

6 P. M. No convulsions to-day; much thirst. No sleep until within the last fifteen minutes.

12th. Has had some sleep, immediately after an opiate; no convulsions. Says she "feels sick," *i. e.* sensation of great weakness; mind perfectly clear. Pulse 136; feeble; articulation more distinct. While speaking, the mouth is drawn towards the right side; complains of pain in left iliac region. No dejection since 10th; sinapism; has had three enemas administered since morning. If no dejection in an hour, infus. sen. comp.  $\frac{3}{4}$ iv. Has appetite; asks for bread, brandy and water occasionally p. r. n.

6 P. M. At noon, nausea and vomiting; vomiting has continued; at first, the fluid vomited was green, afterwards dark coloured; complains of pain in left side; abdomen tender on pressure; no dejection. Pulse 148; feeble; respiration irregular, *i. e.* abrupt; short expiration; fomentations to abdomen.

13th. No vomiting since yesterday at 6 P. M.; is more inclined to delirium. Face flushed; skin at this moment warm; lower extremities have been cold during the night; mind clear, but speaks with much less animation; eyes shut for most part; wants to be fanned; abdomen less tender; pain in left side.

14th. Died at 7 this A. M. Autopsy not allowed.

III. Elizabeth Sumner, æt. 32; entered January 22d, 1847. Health for past year not good; has had affection of chest, probably chronic bronchitis; second gestation; the first time an abortion.

*Jan. 25th.* 11 P. M. Labour commenced.

26th. 11½ A. M. Child born; male. Weight 6½ pounds.

29th. Doing well, with exception of cough, which is very troublesome; complains of soreness in abdomen on coughing; no tenderness on pressure. Pulse 100. At night, pil. scillæ, to be followed by ʒj of ol. ric. in morning.

30th. Two dejections; pain in abdomen continues; increased by motion; tender on pressure in right iliac fossa; skin hot; pulse 112, full; bran poultice to abdomen.

31st. Pain and soreness less; skin moist, less hot; pulse 88.

*Feb. 2d.* Restless and excited last night; insisted on getting out of bed; now rational; complains of occasional darting pain in right iliac region. Emplas. cantharid.

5th. Nights very uneasy; delirious at times. Opii gr. iii at bed-time.

6th. Had the opiate and fluid extract of valerian, without sleep; now, pulse 96; countenance flushed; talks incoherently; every four hours take ipecac. gr. iv until specific effect.

7 P. M. Has taken the ipecac. without vomiting or purging; somewhat more quiet; pulse 96, soft; countenance not flushed; yesterday there was considerable spasmodic action of limbs and body; motion of arm rigid; today it is less; continue ipecac.

7th. 9 A. M. No sleep in night; at times, violent delirium; now, skin moist; pulse 96; countenance flushed; spasmodic action of limbs; tongue coated; makes no complaint.

2 P. M. Has had a decided convulsion, lasting fifteen minutes; now, sweating; tongue moist; less coated; no dejection; no vomiting.

8 P. M. Countenance more natural; no more convulsions; pulse 80; mind more clear; says she feels better; asks for gruel.

8th. 8 A. M. Restless night; two dejections; now expression maniacal; constant muttering; difficultly comprehends; skin moist, hot; pulse 112; has taken cocoa and gruel, takes no notice of an infant brought to her, (her own having been sent away to be nursed;) limbs in almost constant motion.

8 P. M. Pulse 130, as before; take at night pill of camphor grs. ij, and morphine gr. ¼, p. r. n. Frequent convulsions; countenance pale and haggard; unable to articulate, although at times appears to comprehend questions.

9th. Difficult to induce her to swallow pills, but she took one yesterday forenoon. At times, violent delirium, but rather less than yesterday. Had yesterday two involuntary dejections. Now, pulse 88; eyes injected; skin warm; tongue moist, coated; countenance sunken; delirious; continue ipecac. to-day. At night, pills of camphor and opium.

10th. Very little sleep in night; refused to swallow pill; but on the whole night somewhat more quiet than the last. During the forenoon, took ipecac, after which vomited; one small dejection. Now, occasionally rational; able to articulate; asks for gruel, takes it with relish; pays but little attention to what is about her; talks incoherently. Frequently sobbing. On the other hand, her countenance is more natural; temperature of skin more natural; pulse 80; a slight secretion of milk; and the return of lochia, which had nearly ceased. Pill at night, if restless.

12th. Had one pill in night; restless, but less so than the previous night; now, dozing; skin natural; pulse 80; countenance uneasy; not readily aroused; takes nourishment with appetite.

23d. Has been gradually but steadily improving; sits up nearly all day; walks about chamber.

28th. Discharged convalescent.

Although only the first of these cases may be considered an instance of true puerperal convulsions, yet, as the others were cases of convulsions, occurring during an unnaturally excited condition of the nervous system following parturition, I have not hesitated to introduce them.

22. *Child.*—With respect to the children, I find but little worthy of notice.

One case of *cephalæmatoma* occurred. The mother, aged 29 years, her fifth pregnancy. She was ten hours and a half in labour, and her child, a male, weighed eight pounds. The tumour was upon the right parietal bone. The mother left the hospital a fortnight after her confinement, and nothing is known of her child since.

In one case, death followed *hemorrhage from the cord*. The child, a female, weighing seven pounds and a half, was born after a labour of thirty-six hours. "During the afternoon, blood began to ooze from the extremity of the cord. It was tied again and again without effect."

On the next morning, "the right eye was livid and oedematous. Trunk and limbs oedematous, but not discoloured; also various parts, chiefly on limbs. The cellular tissue is almost of a stony hardness. The colour of the skin not altered."

On the second day, "the cord has pulsated up to this time. Blood has continued to ooze from the *extremity* until to-day; it now flows from the root; the cord beginning to be detached. On the third day, the child died."

The only notices of *distortions* I can find are two instances in which "the right foot was turned inwards varus."

To show that it is not an uncommon circumstance for a woman to be mistaken as to her pregnancy, I would state that, during the four years I was connected with this institution, three women of excellent character entered to be confined, neither of whom was pregnant. One of them, a very industrious Irishwoman, from the fact of her menses being suppressed, and her abdomen having become enlarged, and from the belief that she distinguished "*quickening*," made her usual calculations, expended all the means she could spare

from her hard earnings to provide clothing for her expected offspring, and with her "permit" came to the hospital. I was called to attend her in her accouchement. She was in bed, expecting momentarily to be confined. Her pains were *false pains*—she was not pregnant.

Upon another occasion, I was called at night to attend two women who were expecting to be sick. One was in labour; the other, an American, had entered the house a few hours previously, and thought she should probably be confined during the night. While the labour of the one was rapidly advancing, observing that the other was silent, I jocosely asked her what reasons she had for supposing she should be confined. She answered, "Because her doctor had told her she should be." I asked her if that were her only reason. She said it was a principal one; that her catamenia had been irregular, her abdomen had enlarged; that she had suffered much pain in the region of the uterus; and that her physician, satisfied of her pregnancy, had fixed upon the day of her delivery. I examined her, and found the uterus empty. She was suffering from a congestion of its neck, and was dismissed, to enter the Massachusetts General Hospital for treatment.